

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1000411

Luminaire Tested: SA4XXRDP-B1020DB2750-4F0-XX-W2A-A_2700K

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P1000411
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-31)
Test Lab: INNOVATION CENTER
Issue Date: 5/2/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA4XXRDP-B1020DB2750-4F0-XX-W2A-A_2700K
Description: Define 4 Regressed Direct Recessed with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}
Light Source: -
Ballast/Driver: -

Summary

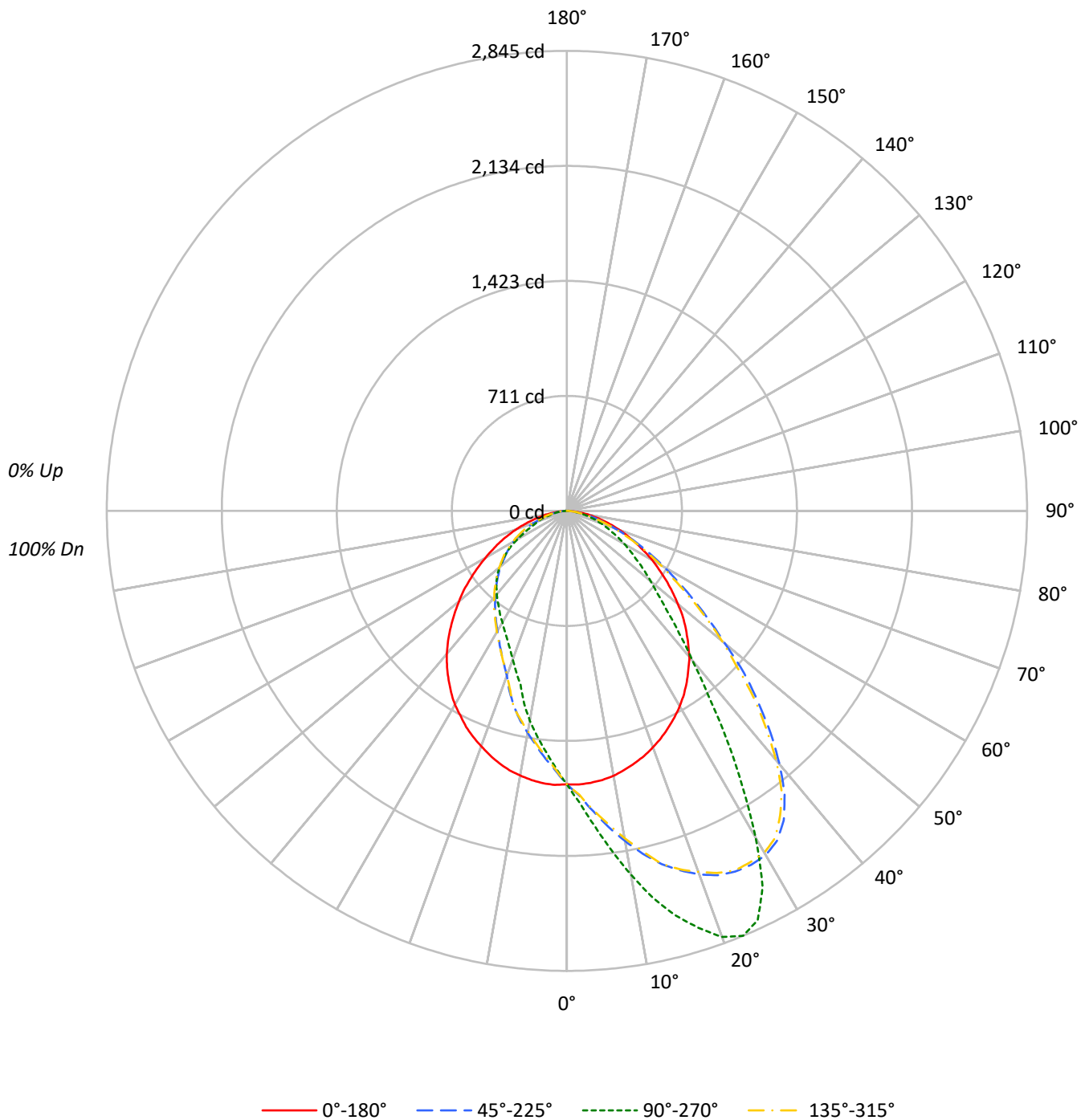
Lumens per Lamp: N/A
Luminaire Lumens: 4274.0 lumens
Efficiency: N/A
Efficacy: 91.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.38
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P1000411

CATALOG NUMBER: SA4XXRDP-B1020DB2750-4F0-XX-W2A-A_2700K

Luminous Intensity Polar Plot



TEST NUMBER: P1000411

CATALOG NUMBER: SA4XXRDP-B1020DB2750-4F0-XX-W2A-A_2700K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86		
2	101	93	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74		
3	93	83	76	70	90	81	75	69	79	73	68	76	71	67	73	69	65	63		
4	85	74	66	60	83	73	65	59	71	64	59	68	63	58	66	61	57	55		
5	79	67	58	52	77	66	58	52	64	57	51	62	56	51	60	55	50	48		
6	73	61	52	46	71	60	52	46	58	51	46	56	50	45	55	49	45	43		
7	68	55	47	41	66	54	47	41	53	46	41	52	45	40	50	44	40	38		
8	64	51	42	37	62	50	42	37	49	42	37	47	41	36	46	40	36	34		
9	59	47	39	33	58	46	38	33	45	38	33	44	38	33	43	37	33	31		
10	56	43	35	30	55	43	35	30	42	35	30	41	34	30	40	34	30	28		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	13787	13787	13787	13787
5°	13817	15992	13839	12223
10°	13774	18919	13763	10908
15°	13641	21853	13641	9374
20°	13502	24331	13431	8476
25°	13324	25117	13263	7870
30°	13136	21988	13034	7505
35°	12858	17116	12694	7283
40°	12545	12835	12298	7164
45°	12004	10134	11705	7102
50°	11355	8556	11045	6896
55°	10653	7457	10304	6527
60°	9955	6710	9510	5777
65°	9069	5914	8779	4969
70°	8283	5326	7894	4482
75°	7426	4464	6909	3822
80°	6396	3776	5823	3583
85°	5230	3190	4332	3190

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 35°

Vertical Angle: 45°

Luminance: 20614 cd/sqm

TEST NUMBER: P1000411

CATALOG NUMBER: SA4XXRDP-B1020DB2750-4F0-XX-W2A-A_2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.7	3.8
10°-20°	494.4	11.6
20°-30°	774.4	18.1
30°-40°	860.0	20.1
40°-50°	762.1	17.8
50°-60°	593.9	13.9
60°-70°	388.5	9.1
70°-80°	190.6	4.5
80°-90°	46.4	1.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1432.6	33.5
0°-40°	2292.5	53.6
0°-60°	3648.5	85.4
0°-90°	4274.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4274.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1691	1691	1691	1691	1691	
5°	1688	1954	1691	1493	1688	160
15°	1616	2589	1616	1110	1616	456
25°	1481	2792	1474	875	1481	683
35°	1292	1719	1275	732	1292	807
45°	1041	879	1015	616	1041	803
55°	749	524	725	459	749	670
65°	470	306	455	258	470	469
75°	236	142	219	121	236	250
85°	56	34	46	34	56	67
90°	0	0	0	0	0	

TEST NUMBER: P1000411

CATALOG NUMBER: SA4XXRDP-B1020DB2750-4F0-XX-W2A-A_2700K

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7
2.5°	1693.5	1708.5	1716.6	1723.4	1737.1	1742.5	1753.4	1756.1	1767.0	1765.7	1761.6
5°	1688.0	1713.9	1733.0	1753.4	1777.9	1791.6	1806.5	1828.3	1839.2	1854.2	1863.8
7.5°	1678.5	1713.9	1745.2	1776.6	1816.1	1837.9	1857.0	1891.0	1919.6	1944.2	1971.4
10°	1663.5	1708.5	1754.8	1797.0	1851.5	1877.4	1906.0	1956.4	1995.9	2030.0	2073.6
12.5°	1640.3	1703.0	1754.8	1812.0	1881.5	1916.9	1955.0	2015.0	2061.3	2117.2	2171.7
15°	1615.8	1685.3	1753.4	1828.3	1907.4	1948.2	1986.4	2066.8	2137.6	2201.6	2261.6
17.5°	1588.6	1664.9	1739.8	1822.9	1918.3	1968.7	2013.6	2110.4	2188.0	2271.1	2331.1
20°	1555.9	1639.0	1724.8	1817.4	1925.1	1980.9	2031.3	2141.7	2227.5	2317.4	2392.4
22.5°	1520.4	1610.4	1704.4	1805.2	1916.9	1978.2	2036.8	2155.3	2254.8	2337.9	2438.7
25°	1480.9	1576.3	1673.0	1779.3	1904.6	1971.4	2031.3	2148.5	2254.8	2363.8	2461.9
27.5°	1440.1	1538.2	1639.0	1750.7	1878.8	1944.2	2012.3	2125.3	2249.3	2367.9	2467.3
30°	1395.1	1490.5	1596.7	1703.0	1839.2	1904.6	1974.1	2096.7	2231.6	2350.1	2457.8
32.5°	1346.1	1444.1	1545.0	1655.3	1788.8	1859.7	1923.7	2062.7	2200.3	2317.4	2418.3
35°	1291.6	1384.2	1479.6	1592.6	1724.8	1788.8	1865.1	2009.5	2148.5	2272.5	2337.9
37.5°	1233.0	1321.5	1410.1	1521.8	1648.5	1726.2	1801.1	1946.9	2094.0	2177.1	2211.2
40°	1178.5	1256.1	1333.8	1441.4	1569.5	1649.9	1726.2	1877.4	2006.8	2070.9	2045.0
42.5°	1109.0	1189.4	1258.9	1358.3	1487.7	1562.7	1640.3	1797.0	1901.9	1927.8	1863.8
45°	1040.9	1107.6	1174.4	1271.1	1407.4	1471.4	1554.5	1700.3	1787.5	1764.3	1670.3
47.5°	974.1	1028.6	1091.3	1185.3	1307.9	1384.2	1461.9	1588.6	1649.9	1617.2	1486.4
50°	895.1	949.6	1015.0	1096.7	1215.3	1288.8	1350.1	1467.3	1513.6	1433.2	1275.2
52.5°	820.2	867.9	923.7	1000.0	1113.1	1179.8	1246.6	1347.4	1362.4	1269.8	1103.5
55°	749.3	787.5	846.1	907.4	1010.9	1081.7	1128.1	1213.9	1209.8	1094.0	951.0
57.5°	675.8	711.2	750.7	814.7	912.8	965.9	1016.4	1091.3	1051.8	953.7	812.0
60°	610.4	630.8	670.3	731.6	814.7	861.0	900.5	941.4	907.4	801.1	692.1
62.5°	538.1	561.3	589.9	639.0	712.5	756.1	784.7	802.5	767.0	685.3	585.8
65°	470.0	490.5	520.4	564.0	619.9	652.6	667.6	679.8	660.8	568.1	489.1
67.5°	408.7	422.3	449.6	478.2	538.1	546.3	566.8	572.2	534.1	463.2	400.5
70°	347.4	361.0	373.3	407.4	434.6	449.6	453.7	453.7	415.5	369.2	317.4
72.5°	290.2	298.4	310.6	333.8	348.8	359.7	365.1	358.3	322.9	284.7	246.6
75°	235.7	239.8	250.7	265.7	277.9	273.8	272.5	264.3	238.4	211.2	189.4
77.5°	181.2	183.9	196.2	200.3	200.3	204.4	198.9	190.7	168.9	148.5	139.0
80°	136.2	140.3	141.7	144.4	141.7	141.7	137.6	124.0	113.1	103.5	96.7
82.5°	94.0	96.7	98.1	94.0	96.7	92.6	85.8	76.3	69.5	68.1	65.4
85°	55.9	57.2	55.9	55.9	51.8	50.4	45.0	43.6	40.9	40.9	39.5
87.5°	27.2	25.9	23.2	20.4	20.4	19.1	20.4	17.7	20.4	19.1	17.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1000411

CATALOG NUMBER: SA4XXRDP-B1020DB2750-4F0-XX-W2A-A_2700K

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7
2.5°	1772.5	1787.5	1788.8	1802.5	1798.4	1791.6	1803.8	1795.6	1812.0	1806.5	1813.4
5°	1876.0	1896.5	1914.2	1925.1	1944.2	1940.1	1960.5	1953.7	1968.7	1953.7	1972.8
7.5°	1997.3	2031.3	2049.1	2077.7	2085.8	2087.2	2111.7	2117.2	2126.7	2117.2	2128.1
10°	2115.8	2156.7	2197.6	2220.7	2235.7	2256.1	2277.9	2287.5	2294.3	2284.8	2291.6
12.5°	2223.4	2287.5	2332.4	2378.8	2389.7	2407.4	2430.5	2427.8	2455.1	2449.6	2461.9
15°	2322.9	2393.7	2448.2	2485.0	2515.0	2530.0	2573.6	2576.3	2574.9	2588.6	2580.4
17.5°	2411.5	2471.4	2549.1	2596.7	2633.5	2633.5	2658.0	2708.5	2704.4	2703.0	2711.2
20°	2483.7	2551.8	2624.0	2704.4	2734.3	2739.8	2773.9	2799.7	2803.8	2803.8	2803.8
22.5°	2538.2	2618.5	2696.2	2753.4	2776.6	2795.7	2825.6	2842.0	2847.4	2844.7	2847.4
25°	2565.4	2641.7	2720.7	2772.5	2786.1	2797.0	2799.7	2809.3	2807.9	2791.6	2801.1
27.5°	2570.9	2644.4	2696.2	2709.8	2703.0	2696.2	2652.6	2656.7	2644.4	2619.9	2629.4
30°	2546.3	2585.8	2584.5	2542.2	2530.0	2501.4	2461.9	2403.3	2355.6	2335.2	2342.0
32.5°	2457.8	2457.8	2408.7	2313.4	2271.1	2219.4	2148.5	2095.4	2032.7	2019.1	2045.0
35°	2335.2	2265.7	2175.8	2050.4	1986.4	1948.2	1825.6	1787.5	1734.3	1719.4	1731.6
37.5°	2144.4	2028.6	1897.8	1780.7	1726.2	1658.0	1550.4	1495.9	1457.8	1431.9	1444.1
40°	1930.5	1790.2	1654.0	1509.5	1449.6	1393.7	1313.4	1264.3	1203.0	1205.7	1209.8
42.5°	1726.2	1561.3	1408.7	1275.2	1218.0	1171.7	1115.8	1055.9	1034.1	1027.3	1020.4
45°	1509.5	1333.8	1190.7	1091.3	1039.5	995.9	944.1	910.1	884.2	878.8	885.6
47.5°	1305.2	1156.7	1020.4	927.8	885.6	863.8	822.9	791.6	775.2	761.6	769.8
50°	1119.9	980.9	871.9	794.3	764.3	749.3	711.2	694.8	678.5	674.4	673.0
52.5°	967.3	848.8	754.8	692.1	668.9	660.8	632.2	609.0	595.4	599.5	602.2
55°	828.3	727.5	654.0	603.5	584.5	574.9	554.5	538.1	528.6	524.5	527.3
57.5°	705.7	618.5	565.4	524.5	509.5	505.5	483.7	478.2	471.4	467.3	467.3
60°	594.0	532.7	483.7	460.5	444.1	440.1	423.7	416.9	415.5	411.4	408.7
62.5°	500.0	449.6	415.5	391.0	384.2	382.8	371.9	363.8	359.7	356.9	356.9
65°	418.3	381.5	352.9	335.2	329.7	327.0	314.7	312.0	309.3	306.5	305.2
67.5°	348.8	316.1	295.6	283.4	276.6	277.9	271.1	265.7	265.7	264.3	262.9
70°	282.0	261.6	243.9	237.1	234.3	231.6	228.9	224.8	223.4	223.4	223.4
72.5°	222.1	208.4	198.9	194.8	192.1	189.4	186.6	186.6	186.6	185.3	185.3
75°	170.3	164.9	158.0	154.0	154.0	156.7	152.6	148.5	144.4	141.7	143.1
77.5°	128.1	125.3	121.3	114.4	115.8	113.1	113.1	110.4	111.7	111.7	109.0
80°	94.0	89.9	88.6	84.5	85.8	84.5	83.1	83.1	80.4	80.4	80.4
82.5°	65.4	61.3	61.3	59.9	58.6	58.6	57.2	57.2	58.6	55.9	55.9
85°	39.5	38.1	38.1	35.4	35.4	35.4	35.4	36.8	35.4	34.1	34.1
87.5°	17.7	19.1	17.7	16.3	16.3	16.3	15.0	15.0	13.6	15.0	15.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1000411

CATALOG NUMBER: SA4XXRDP-B1020DB2750-4F0-XX-W2A-A_2700K

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7
2.5°	1817.4	1807.9	1806.5	1806.5	1791.6	1799.7	1783.4	1765.7	1757.5	1757.5	1742.5
5°	1968.7	1959.1	1949.6	1934.6	1934.6	1926.4	1900.6	1874.7	1855.6	1839.2	1821.5
7.5°	2124.0	2114.5	2087.2	2072.2	2080.4	2064.0	2030.0	1986.4	1953.7	1927.8	1891.0
10°	2292.9	2267.0	2253.4	2245.2	2216.6	2198.9	2159.4	2095.4	2054.5	2020.4	1972.8
12.5°	2430.5	2438.7	2386.9	2391.0	2362.4	2337.9	2276.6	2215.3	2154.0	2106.3	2035.4
15°	2579.0	2554.5	2523.2	2498.6	2489.1	2459.1	2407.4	2325.6	2258.9	2183.9	2103.6
17.5°	2696.2	2677.1	2647.2	2624.0	2603.6	2531.3	2487.7	2415.5	2324.3	2250.7	2152.6
20°	2795.7	2777.9	2735.7	2720.7	2683.9	2632.2	2569.5	2457.8	2376.0	2295.7	2200.3
22.5°	2837.9	2820.2	2783.4	2764.3	2741.2	2690.7	2630.8	2524.5	2423.7	2322.9	2222.1
25°	2802.5	2802.5	2784.8	2777.9	2757.5	2712.5	2651.2	2561.3	2453.7	2344.7	2224.8
27.5°	2630.8	2664.9	2677.1	2683.9	2683.9	2685.3	2643.1	2555.9	2451.0	2344.7	2219.4
30°	2382.8	2440.1	2490.5	2505.5	2531.3	2560.0	2577.7	2535.4	2441.4	2329.7	2204.4
32.5°	2070.9	2144.4	2238.4	2261.6	2297.0	2382.8	2430.5	2448.2	2396.5	2298.4	2164.9
35°	1760.2	1852.9	1910.1	1980.9	2013.6	2140.3	2246.6	2310.6	2298.4	2239.8	2118.5
37.5°	1489.1	1542.2	1611.7	1686.7	1752.1	1873.3	2005.5	2129.4	2179.8	2151.2	2060.0
40°	1228.9	1291.6	1374.7	1436.0	1480.9	1602.2	1765.7	1900.6	2010.9	2028.6	1972.8
42.5°	1045.0	1107.6	1158.0	1224.8	1260.2	1377.4	1521.8	1690.7	1821.5	1891.0	1866.5
45°	903.3	941.4	982.3	1020.4	1064.0	1167.6	1301.1	1486.4	1633.5	1731.6	1741.2
47.5°	779.3	813.4	848.8	884.2	908.7	989.1	1111.7	1262.9	1423.7	1558.6	1611.7
50°	692.1	708.4	734.3	754.8	783.4	852.9	951.0	1081.7	1252.0	1397.8	1467.3
52.5°	606.3	626.7	647.1	664.9	683.9	733.0	822.9	936.0	1083.1	1233.0	1318.8
55°	534.1	550.4	569.5	581.7	592.6	636.2	704.4	791.6	918.3	1060.0	1166.2
57.5°	475.5	482.3	498.6	505.5	517.7	553.1	602.2	679.8	782.0	919.6	1006.8
60°	411.4	425.1	437.3	442.8	452.3	476.8	510.9	583.1	671.7	772.5	871.9
62.5°	359.7	365.1	374.7	381.5	388.3	414.2	442.8	497.3	564.0	648.5	739.8
65°	312.0	314.7	320.2	329.7	333.8	352.9	369.2	408.7	471.4	535.4	626.7
67.5°	262.9	265.7	272.5	277.9	282.0	294.3	312.0	340.6	374.7	445.5	495.9
70°	224.8	224.8	228.9	231.6	235.7	241.1	250.7	272.5	303.8	348.8	395.1
72.5°	188.0	188.0	188.0	192.1	192.1	196.2	201.6	216.6	238.4	273.8	303.8
75°	145.8	147.1	149.9	149.9	151.2	156.7	160.8	164.9	175.8	198.9	226.2
77.5°	110.4	113.1	114.4	111.7	114.4	114.4	119.9	125.3	130.8	137.6	158.0
80°	81.7	83.1	80.4	81.7	81.7	84.5	87.2	85.8	88.6	96.7	102.2
82.5°	54.5	55.9	55.9	55.9	55.9	59.9	59.9	58.6	59.9	61.3	62.7
85°	34.1	32.7	32.7	34.1	32.7	32.7	34.1	35.4	34.1	35.4	36.8
87.5°	15.0	15.0	15.0	15.0	13.6	13.6	15.0	13.6	15.0	13.6	12.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1000411

CATALOG NUMBER: SA4XXRDP-B1020DB2750-4F0-XX-W2A-A_2700K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7
2.5°	1734.3	1727.5	1723.4	1722.1	1709.8	1703.0	1698.9	1696.2	1692.1	1681.2	1671.7
5°	1799.7	1780.7	1771.1	1760.2	1741.2	1719.4	1701.6	1690.7	1677.1	1655.3	1634.9
7.5°	1861.0	1832.4	1813.4	1798.4	1765.7	1730.3	1701.6	1678.5	1652.6	1622.6	1594.0
10°	1925.1	1878.8	1854.2	1831.1	1783.4	1737.1	1696.2	1662.1	1625.3	1585.8	1554.5
12.5°	1975.5	1914.2	1886.9	1854.2	1795.6	1741.2	1689.4	1643.1	1595.4	1553.1	1508.2
15°	2034.1	1957.8	1926.4	1884.2	1803.8	1733.0	1666.2	1615.8	1566.8	1504.1	1456.4
17.5°	2068.1	1979.6	1934.6	1897.8	1810.6	1724.8	1647.1	1584.5	1527.3	1464.6	1414.2
20°	2102.2	2001.4	1951.0	1899.2	1795.6	1704.4	1622.6	1547.7	1487.7	1419.6	1367.9
22.5°	2113.1	1995.9	1942.8	1895.1	1786.1	1683.9	1589.9	1513.6	1444.1	1376.0	1317.4
25°	2113.1	1994.6	1931.9	1870.6	1756.1	1651.2	1557.2	1474.1	1396.5	1328.3	1269.8
27.5°	2091.3	1967.3	1901.9	1846.1	1727.5	1614.4	1517.7	1426.4	1351.5	1283.4	1216.6
30°	2064.0	1927.8	1862.4	1795.6	1681.2	1573.6	1468.7	1384.2	1305.2	1227.5	1167.6
32.5°	2030.0	1885.6	1813.4	1745.2	1624.0	1512.3	1415.5	1332.4	1257.5	1177.1	1110.4
35°	1980.9	1822.9	1742.5	1682.6	1565.4	1449.6	1357.0	1275.2	1203.0	1119.9	1047.7
37.5°	1918.3	1765.7	1683.9	1610.4	1489.1	1382.8	1295.6	1216.6	1145.8	1069.5	989.1
40°	1844.7	1685.3	1614.4	1536.8	1408.7	1307.9	1226.2	1155.3	1084.5	1012.3	934.6
42.5°	1761.6	1603.5	1524.5	1449.6	1327.0	1227.5	1151.2	1087.2	1021.8	955.0	871.9
45°	1662.1	1513.6	1437.3	1366.5	1248.0	1145.8	1076.3	1015.0	959.1	891.0	817.4
47.5°	1550.4	1421.0	1343.3	1267.0	1151.2	1062.7	994.6	942.8	895.1	827.0	760.2
50°	1441.4	1313.4	1250.7	1173.0	1066.8	983.7	914.2	870.6	833.8	767.0	707.1
52.5°	1303.8	1207.1	1147.1	1080.4	978.2	893.7	839.2	801.1	757.5	705.7	652.6
55°	1182.6	1092.6	1045.0	982.3	881.5	806.5	760.2	724.8	690.7	644.4	602.2
57.5°	1045.0	989.1	941.4	886.9	787.5	723.4	682.6	652.6	621.3	583.1	549.0
60°	900.5	874.7	828.3	784.7	700.3	644.4	610.4	583.1	553.1	521.8	493.2
62.5°	772.5	757.5	730.2	696.2	617.2	569.5	535.4	515.0	493.2	464.6	437.3
65°	651.2	644.4	618.5	594.0	539.5	497.3	467.3	455.0	430.5	408.7	384.2
67.5°	543.6	535.4	520.4	509.5	463.2	423.7	408.7	392.4	371.9	355.6	335.2
70°	434.6	433.2	423.7	410.1	385.6	356.9	342.0	331.1	310.6	298.4	283.4
72.5°	337.9	344.7	336.5	331.1	314.7	294.3	280.7	273.8	257.5	248.0	237.1
75°	252.0	257.5	261.6	252.0	248.0	238.4	226.2	219.3	211.2	197.5	193.5
77.5°	171.7	183.9	183.9	186.6	188.0	182.6	173.0	167.6	158.0	155.3	149.9
80°	113.1	124.0	125.3	128.1	132.2	132.2	125.3	124.0	114.4	113.1	109.0
82.5°	65.4	74.9	80.4	84.5	83.1	88.6	83.1	81.7	76.3	76.3	73.6
85°	35.4	36.8	39.5	42.2	45.0	47.7	47.7	46.3	45.0	43.6	40.9
87.5°	13.6	13.6	15.0	13.6	15.0	17.7	19.1	19.1	17.7	16.3	13.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1000411

CATALOG NUMBER: SA4XXRDP-B1020DB2750-4F0-XX-W2A-A_2700K

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7
2.5°	1663.5	1660.8	1658.0	1647.1	1637.6	1621.3	1607.6	1602.2	1600.8	1602.2	1598.1
5°	1615.8	1614.4	1604.9	1585.8	1568.1	1549.1	1535.4	1521.8	1513.6	1513.6	1504.1
7.5°	1570.9	1561.3	1553.1	1528.6	1508.2	1482.3	1461.9	1449.6	1442.8	1427.8	1427.8
10°	1523.2	1509.5	1498.6	1475.5	1445.5	1419.6	1393.7	1378.8	1366.5	1355.6	1351.5
12.5°	1475.5	1464.6	1444.1	1419.6	1389.7	1357.0	1329.7	1318.8	1290.2	1267.0	1268.4
15°	1430.5	1406.0	1396.5	1361.0	1325.6	1294.3	1254.8	1223.4	1200.3	1185.3	1166.2
17.5°	1380.1	1355.6	1337.9	1307.9	1261.6	1212.5	1174.4	1132.2	1109.0	1083.1	1070.8
20°	1324.3	1303.8	1290.2	1242.5	1186.7	1128.1	1085.8	1060.0	1034.1	1015.0	1004.1
22.5°	1276.6	1250.7	1234.3	1170.3	1109.0	1050.4	1017.7	995.9	974.1	957.8	952.3
25°	1215.3	1200.3	1160.8	1104.9	1030.0	990.5	961.9	933.2	921.0	910.1	897.8
27.5°	1164.9	1128.1	1100.8	1027.3	980.9	936.0	907.4	885.6	870.6	859.7	850.1
30°	1102.2	1068.1	1030.0	968.7	926.4	884.2	858.3	840.6	824.3	817.4	809.3
32.5°	1036.8	1005.5	968.7	919.6	867.9	835.2	814.7	795.6	784.7	777.9	768.4
35°	978.2	938.7	914.2	867.9	825.6	788.8	769.8	753.4	741.1	738.4	737.1
37.5°	915.5	885.6	862.4	814.7	779.3	748.0	730.2	712.5	705.7	704.4	698.9
40°	861.0	835.2	813.4	768.4	730.2	701.6	688.0	677.1	670.3	670.3	668.9
42.5°	813.4	786.1	764.3	723.4	689.4	663.5	648.5	637.6	634.9	636.2	634.9
45°	760.2	737.1	715.3	673.0	644.4	625.3	609.0	603.5	599.5	600.8	602.2
47.5°	709.8	690.7	668.9	634.9	602.2	581.7	572.2	566.8	566.8	566.8	569.5
50°	664.9	643.1	624.0	588.6	558.6	542.2	534.1	527.3	528.6	530.0	531.3
52.5°	611.7	592.6	579.0	543.6	521.8	501.4	491.8	493.2	491.8	491.8	494.6
55°	565.4	546.3	532.7	500.0	478.2	464.6	456.4	452.3	453.7	451.0	456.4
57.5°	513.6	497.3	487.7	456.4	437.3	425.1	418.3	411.4	414.2	412.8	411.4
60°	468.7	449.6	434.6	412.8	396.5	381.5	377.4	370.6	373.3	370.6	369.2
62.5°	416.9	401.9	391.0	369.2	355.6	343.3	333.8	329.7	328.3	324.3	320.2
65°	365.1	356.9	346.1	324.3	310.6	301.1	295.6	291.6	290.2	279.3	267.0
67.5°	317.4	312.0	301.1	284.7	272.5	262.9	254.8	248.0	239.8	231.6	224.8
70°	272.5	264.3	257.5	242.5	231.6	222.1	213.9	205.7	201.6	193.5	190.7
72.5°	228.9	220.7	213.9	200.3	190.7	181.2	178.5	168.9	164.9	163.5	163.5
75°	183.9	177.1	173.0	160.8	152.6	145.8	141.7	139.0	136.2	133.5	129.4
77.5°	140.3	136.2	133.5	125.3	118.5	114.4	113.1	103.5	100.8	98.1	95.4
80°	102.2	100.8	98.1	91.3	88.6	79.0	79.0	76.3	74.9	74.9	74.9
82.5°	69.5	66.8	65.4	58.6	57.2	55.9	54.5	53.1	54.5	53.1	54.5
85°	36.8	35.4	34.1	34.1	34.1	34.1	34.1	34.1	34.1	32.7	34.1
87.5°	13.6	13.6	13.6	13.6	12.3	13.6	13.6	12.3	13.6	13.6	13.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1000411

CATALOG NUMBER: SA4XXRDP-B1020DB2750-4F0-XX-W2A-A_2700K

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7
2.5°	1598.1	1603.5	1596.7	1600.8	1591.3	1589.9	1591.3	1591.3	1592.6	1594.0	1595.4
5°	1508.2	1506.8	1498.6	1493.2	1489.1	1493.2	1495.9	1498.6	1495.9	1498.6	1500.0
7.5°	1423.7	1419.6	1415.5	1406.0	1408.7	1406.0	1414.2	1410.1	1410.1	1416.9	1422.3
10°	1348.8	1340.6	1337.9	1327.0	1318.8	1317.4	1327.0	1331.1	1335.2	1337.9	1348.8
12.5°	1252.0	1239.8	1230.3	1234.3	1211.2	1220.7	1223.4	1218.0	1234.3	1253.4	1242.5
15°	1148.5	1149.9	1130.8	1124.0	1104.9	1110.4	1111.7	1125.3	1139.0	1137.6	1154.0
17.5°	1072.2	1064.0	1047.7	1046.3	1038.2	1042.2	1040.9	1051.8	1047.7	1054.5	1068.1
20°	1001.4	995.9	982.3	976.8	979.6	976.8	978.2	979.6	983.7	998.6	995.9
22.5°	945.5	938.7	938.7	931.9	923.7	921.0	927.8	931.9	937.3	940.1	946.9
25°	896.5	891.0	884.2	880.1	873.3	874.7	878.8	884.2	888.3	893.7	899.2
27.5°	846.1	846.1	839.2	837.9	835.2	833.8	839.2	842.0	842.0	846.1	851.5
30°	806.5	806.5	799.7	798.4	797.0	797.0	801.1	802.5	803.8	807.9	810.6
32.5°	768.4	767.0	764.3	765.7	764.3	765.7	765.7	767.0	769.8	771.1	776.6
35°	733.0	734.3	731.6	731.6	730.2	731.6	734.3	735.7	737.1	739.8	739.8
37.5°	698.9	701.6	700.3	704.4	704.4	704.4	704.4	707.1	707.1	707.1	705.7
40°	668.9	668.9	667.6	670.3	673.0	673.0	674.4	674.4	675.8	675.8	674.4
42.5°	634.9	637.6	641.7	643.1	645.8	644.4	648.5	647.1	648.5	645.8	643.1
45°	603.5	603.5	609.0	614.4	615.8	615.8	615.8	618.5	615.8	611.7	610.4
47.5°	569.5	572.2	574.9	581.7	583.1	583.1	583.1	583.1	580.4	580.4	580.4
50°	535.4	536.8	538.1	540.9	545.0	543.6	543.6	543.6	549.0	543.6	545.0
52.5°	494.6	495.9	497.3	502.7	501.4	501.4	502.7	502.7	506.8	505.5	502.7
55°	453.7	453.7	456.4	456.4	456.4	459.1	460.5	463.2	461.9	463.2	464.6
57.5°	412.8	410.1	408.7	408.7	412.8	411.4	412.8	412.8	418.3	421.0	422.3
60°	365.1	365.1	363.8	355.6	355.6	354.2	358.3	361.0	363.8	376.0	374.7
62.5°	316.1	310.6	305.2	306.5	298.4	302.5	299.7	302.5	310.6	320.2	321.5
65°	267.0	262.9	257.5	256.1	253.4	257.5	256.1	257.5	261.6	267.0	273.8
67.5°	223.4	222.1	219.3	218.0	218.0	218.0	220.7	220.7	222.1	226.2	230.2
70°	190.7	189.4	190.7	188.0	189.4	188.0	189.4	190.7	192.1	193.5	197.5
72.5°	160.8	160.8	160.8	158.0	160.8	159.4	159.4	160.8	162.1	163.5	166.2
75°	128.1	125.3	122.6	119.9	118.5	121.3	122.6	121.3	125.3	130.8	130.8
77.5°	96.7	95.4	95.4	95.4	96.7	95.4	98.1	96.7	98.1	98.1	100.8
80°	74.9	73.6	74.9	74.9	73.6	76.3	74.9	74.9	76.3	77.7	76.3
82.5°	54.5	55.9	54.5	54.5	54.5	57.2	54.5	54.5	54.5	55.9	55.9
85°	34.1	34.1	34.1	34.1	35.4	34.1	35.4	34.1	36.8	35.4	35.4
87.5°	12.3	13.6	15.0	15.0	15.0	15.0	13.6	15.0	16.3	15.0	16.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1000411

CATALOG NUMBER: SA4XXRDP-B1020DB2750-4F0-XX-W2A-A_2700K

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7	1690.7
2.5°	1600.8	1607.6	1604.9	1595.4	1599.5	1607.6	1615.8	1626.7	1633.5	1639.0	1641.7
5°	1506.8	1519.1	1516.4	1516.4	1521.8	1535.4	1549.1	1572.2	1580.4	1589.9	1603.5
7.5°	1423.7	1433.2	1441.4	1444.1	1452.3	1470.0	1487.7	1513.6	1534.1	1545.0	1553.1
10°	1350.1	1357.0	1369.2	1376.0	1384.2	1406.0	1431.9	1459.1	1479.6	1498.6	1509.5
12.5°	1256.1	1283.4	1299.7	1310.6	1321.5	1354.2	1374.7	1404.6	1429.2	1446.9	1463.2
15°	1151.2	1183.9	1193.5	1235.7	1262.9	1288.8	1320.2	1355.6	1378.8	1399.2	1421.0
17.5°	1062.7	1085.8	1096.7	1141.7	1164.9	1205.7	1250.7	1295.6	1331.1	1346.1	1367.9
20°	1006.8	1019.1	1040.9	1055.9	1080.4	1128.1	1177.1	1231.6	1284.7	1299.7	1321.5
22.5°	949.6	965.9	980.9	1001.4	1020.4	1053.1	1102.2	1162.1	1219.4	1246.6	1272.5
25°	897.8	914.2	923.7	945.5	963.2	995.9	1030.0	1091.3	1159.4	1182.6	1223.4
27.5°	857.0	866.5	882.8	892.4	912.8	942.8	974.1	1020.4	1087.2	1126.7	1166.2
30°	816.1	822.9	836.5	850.1	865.1	885.6	921.0	965.9	1027.3	1061.3	1100.8
32.5°	775.2	786.1	794.3	803.8	820.2	844.7	869.2	912.8	961.9	1000.0	1039.5
35°	741.1	745.2	756.1	767.0	777.9	799.7	825.6	867.9	911.4	941.4	976.8
37.5°	704.4	711.2	719.3	723.4	741.1	754.8	782.0	814.7	866.5	885.6	921.0
40°	675.8	674.4	682.6	689.4	697.6	719.3	735.7	771.1	812.0	842.0	863.8
42.5°	640.3	640.3	643.1	651.2	662.1	675.8	694.8	724.8	767.0	788.8	814.7
45°	611.7	607.6	609.0	614.4	621.3	634.9	654.0	679.8	722.1	739.8	767.0
47.5°	577.7	573.6	573.6	579.0	584.5	594.0	609.0	639.0	673.0	696.2	716.6
50°	539.5	540.9	539.5	543.6	546.3	555.9	572.2	596.7	628.1	647.1	670.3
52.5°	504.1	501.4	500.0	502.7	508.2	515.0	532.7	554.5	584.5	603.5	624.0
55°	460.5	463.2	463.2	463.2	471.4	474.1	487.7	509.5	539.5	554.5	573.6
57.5°	421.0	419.6	422.3	421.0	427.8	437.3	448.2	464.6	494.6	509.5	527.3
60°	377.4	378.7	380.1	380.1	385.6	395.1	407.4	422.3	446.9	461.9	478.2
62.5°	324.3	331.1	337.9	340.6	348.8	355.6	363.8	380.1	401.9	412.8	427.8
65°	273.8	283.4	292.9	299.7	305.2	312.0	322.9	337.9	355.6	366.5	381.5
67.5°	230.2	237.1	249.3	256.1	267.0	275.2	282.0	294.3	316.1	320.2	332.4
70°	198.9	201.6	207.1	212.5	224.8	231.6	239.8	252.0	268.4	277.9	284.7
72.5°	167.6	168.9	171.7	177.1	182.6	190.7	200.3	211.2	226.2	230.2	239.8
75°	133.5	141.7	141.7	145.8	149.9	154.0	162.1	173.0	182.6	189.4	194.8
77.5°	99.5	103.5	106.3	113.1	118.5	122.6	128.1	136.2	141.7	147.1	151.2
80°	77.7	79.0	80.4	80.4	83.1	88.6	94.0	99.5	106.3	109.0	113.1
82.5°	57.2	57.2	57.2	59.9	61.3	62.7	62.7	65.4	72.2	74.9	79.0
85°	36.8	36.8	36.8	36.8	38.1	39.5	40.9	42.2	42.2	42.2	45.0
87.5°	15.0	17.7	16.3	17.7	17.7	17.7	17.7	19.1	19.1	20.4	20.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1000411

CATALOG NUMBER: SA4XXRDP-B1020DB2750-4F0-XX-W2A-A_2700K

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1690.7	1690.7	1690.7	1690.7
2.5°	1652.6	1660.8	1674.4	1693.5
5°	1614.4	1637.6	1659.4	1688.0
7.5°	1580.4	1607.6	1637.6	1678.5
10°	1540.9	1574.9	1613.1	1663.5
12.5°	1494.6	1542.2	1585.8	1640.3
15°	1460.5	1495.9	1551.8	1615.8
17.5°	1412.8	1460.5	1516.4	1588.6
20°	1367.9	1418.3	1480.9	1555.9
22.5°	1320.2	1377.4	1440.1	1520.4
25°	1271.1	1332.4	1395.1	1480.9
27.5°	1226.2	1282.0	1352.9	1440.1
30°	1171.7	1235.7	1303.8	1395.1
32.5°	1118.5	1185.3	1254.8	1346.1
35°	1061.3	1128.1	1204.4	1291.6
37.5°	1005.5	1079.0	1148.5	1233.0
40°	944.1	1020.4	1092.6	1178.5
42.5°	884.2	963.2	1035.4	1109.0
45°	828.3	906.0	971.4	1040.9
47.5°	775.2	844.7	911.4	974.1
50°	723.4	782.0	843.3	895.1
52.5°	668.9	724.8	773.8	820.2
55°	619.9	663.5	707.1	749.3
57.5°	561.3	604.9	643.1	675.8
60°	512.3	539.5	576.3	610.4
62.5°	456.4	487.7	516.4	538.1
65°	401.9	429.2	451.0	470.0
67.5°	355.6	371.9	388.3	408.7
70°	299.7	313.4	332.4	347.4
72.5°	252.0	262.9	272.5	290.2
75°	204.4	213.9	219.3	235.7
77.5°	158.0	167.6	171.7	181.2
80°	121.3	122.6	128.1	136.2
82.5°	83.1	85.8	87.2	94.0
85°	47.7	54.5	53.1	55.9
87.5°	20.4	21.8	24.5	27.2
90°	0.0	0.0	0.0	0.0

(END OF REPORT)